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BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

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| EXAMINER |
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GEBRESILASSIE, KIBROM K

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| ART UNIT | PAPER NUMBER |
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2128

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07/09/2007

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

09/996,745

Applicant(s)

LICHTENBERG ET AL.

Examiner

Kibrom K. Gebresilassie

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 November 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This communication is responsive to amended application filed on 04/18/2007.
2. Claims 1-45 are pending.
3. Claims 43-45 are new.

Response to Arguments

4. Response to Personal Interview: Personal interview was conducted regarding this application on April 18, 2007. Examiner likes to thank applicants and applicant representative for a brief explanation of the claimed invention.

Applicant indicated that examiner agreement at the time of the interview as follows:

In addition, Applicants' representative also presented proposed claim amendment to further distinguish the present invention from Lynch. In particular, Applicants' representative proposed to recite that the Directed Acyclic Graph (DAG) is a non-tree structure. The Examiner stated that this recitation would be sufficient to distinguish the present invention from Lynch.

In response, examiner did not state that the limitation (i.e. DAG being a non-tree structure) would be sufficient to distinguish from the prior art.

Examiner suggested amending the claims to indicate the distinction between the features of "hierarchy data structure" of the prior art and "DAG" of the claimed invention.

Further, examiner suggested that applicants to make sure whether the limitation (i.e. DAG being a non-tree structure) is described in the specification in such a way as to reasonably convey to one skilled in the relevant art.

5. Response to 102 and 103 rejection: Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

Drawings

6. Figures 4-10 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Applicants specification recites as follows:

BDDs has a well known graphical representation. Figure 5 is an example of this representation. The figure is a BDD over two variables X_0 and X_1 . The chosen ordering \preceq of the variables is $X_0 \preceq X_1$ and the BDD represents the formula:

$$X_0 \rightarrow ((X_1 \rightarrow 0, 1), 1) = (\neg X_0) \vee (\neg X_1).$$

The BDD graphic representations are well known and are **PRIOR ART**.

7. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the **speech**

synthesizer and/or speech recognizer must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

8. As per claim 4, the claimed invention recites:

providing a system with a speech synthesizer and the providing of information to a user
further comprises providing the information by speech which is generated by the speech
synthesizer.
, which is grammatical incorrect.

9. Claims 40-42 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

For example,

1. (Currently Amended) A method of configuring a product comprising a number of components, the method comprising:

is an independent claim.

also

40. (Original) A computer program comprising computer program code means adapted to perform all the steps of the method of claim 1 when said program is run on a computer.

41. (Original) A computer program as claimed in claim 40 embodied on a computer-readable medium.

42. (Original) A computer readable medium comprising the computer program according to claim 40.

are separate independent claims:

Therefore, the claimed invention has four separate independent claims.

MPEP state as follows:

III. EXCESS CLAIMS FEES

37 CFR 1.16(h) sets forth the excess claims fee for each independent claim in excess of three. 37 CFR 1.16(i) sets forth the excess claims fee for each claim (whether independent or dependent) in excess of twenty. The Consolidated Appropriations Act

Applicant should make a payment for each independent claim in excess of three according to the MPEP shown above. Appropriate correction is required.

Claim Rejections - 35 USC § 112

10. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

11. Claim 1-45 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claimed invention recites the “**DAG being a non-tree structure**”, which nowhere found in the specification.

12. Claims 1-45 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for **DAG**, does not reasonably provide enablement for **DAG being non-tree structure**. The specification does not enable any person

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skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

13. Claim 40 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

MPEP States as follows:

2164.08(a) Single Means Claim

A single means claim, i.e., where a means recitation does not appear in combination with another recited element of means, is subject to an undue breadth rejection under 35 U.S.C. 112, first paragraph. *In re Hyatt*, 708 F.2d 712, 714-715, 218 USPQ 195, 197 (Fed. Cir. 1983) (A single means claim which covered every conceivable means for achieving the stated purpose was held nonenabling for the scope of the claim because the specification disclosed at most only those means known to the inventor.). When claims depend on a recited property, a fact situation comparable to *Hyatt* is possible, where the claim covers every conceivable structure (means) for achieving the stated property (result) while the specification discloses at most only those known to the inventor.

14. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

15. Claims 1-45 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite in that it fails to point out what is included or excluded by the claim language. This claim is an omnibus type claim. For example, claim 1 recites "DAG being non-tree structure". If that is the case, the "non-tree structure" could not limit the claimed

invention. Therefore, the claimed invention is unclear what is included or excluded by the claim language of " DAG being non-tree structure".

16. Claims 1-45 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

For example,

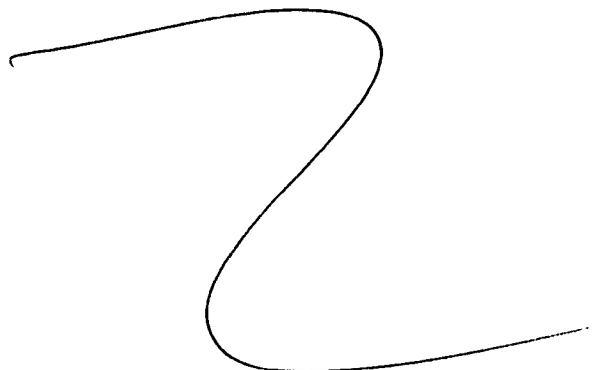
a. Claim 1 recites:

checking the DAG whether the selected alternative ~~selected~~ is compatible with
other ~~chosen~~ selected alternatives ~~from~~ of other chosen components.

However, it is unclear how this works?

b. As per claim 1, 3, 5, 6, and 36, the claimed invention recites "other chosen alternatives from other components". It is unclear what applicants mean by "other".

c. As per claims 3, and 5, it is unclear what the claimed invention mean by *providing "this" information to a user*. Which information?



d. As per claim 14, the claimed invention recites:

nodes, the mathematical expressions of which are ordered according to a given ordering such that, for each node, the expression of the actual node is of a lower order than the expressions of any nodes pointed to by the pointers of the actual node.
it is unclear what this means.

e. As per claim 29, the claimed invention recites:

identities and values/dependencies relating to chosen alternatives of components, the chosen
it is unclear what "values/dependencies" mean.

f. As per claim 30, the claimed invention as whole is not clear. What is the difference between the "DAG" and the "actual DAG".

g. As per claims 32, and 33, the claimed invention recites "identifying a user".
It is unclear applicants mean by "identifying" a user. What is "identified"?

h. As per claim 38, it is unclear what "observer" and "non-observer" mean in the claimed invention.

i. As per claims 40-42, the claimed inventions are in different statutory categories from where they depend on (**See: *Claim Objection***).

- j. As per claim 40, it is unclear what "means adapted to" mean?

Further, it is unclear what will happen **when not run on a computer?**

- k. Claim 45 recites:

45. (New) A method of configuring a product according to claim 1, wherein at least one of the alternatives of the current component is compatible with the other selected alternative respectively for the other chosen components and is compatible with at least one of the alternatives in each of yet-to-be-chosen components.
it is unclear what this mean?

Claim Rejections - 35 USC § 101

17. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

18. Claims 1-39 are rejected under 35 U.S.C. 101 as being directed to nonstatutory subject matter since the claims as a whole are drawn to **an abstract idea** and do not provide for a practical application, as evidenced by lack of physical transformation or a useful, tangible, and concrete result.

19. Claims 40 and 41 are rejected under 35 U.S.C. 101 as being directed to nonstatutory subject matter since the claims as a whole are drawn to **program per se** and do not provide for a practical application, as evidenced by lack of physical transformation or a useful, tangible, and concrete result.

20. Claims 40-42 are rejected under 35 U.S.C. 101 because the claimed invention does not fall within at least one of the four categories of patent eligible subject matter in 35 U.S.C. 101 (process, machine, manufacture, or composition of matter).

Applicants Own Admission

21. The following is noted from the specification:

Page 7, lines 30-33:

30 This method is rather simple in that the constructing of a partial DAG from a rule is normally a simple task - and the combination of DAGs is a well-known technique, which is, actually, facilitated if the above ordering of the expressions is used.

Page 17, lines 30-34:

- The product model is encoded as a virtual table. The virtual table is a directed acyclic graph that represents all consistent configurations. This concrete directed acyclic graph is a Boolean Decision Diagram (BDD) (known to the man skilled in the field of *symbolic model checking*) with two variables external (representing that the selected gear is external) and carbon (representing that the carbon

Page 25, lines 3-5:

A Boolean Decision Diagram (BDD) is a DAG comprising nodes each containing a single Boolean variable. It is well known from the area of formal verification of hardware circuits that BDDs can be used to encode arbitrary Boolean functions of type (where n is the number of Boolean variables):

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Page 25, lines 16-19:

For example, Difference Decision Diagrams (See Møller et al: *Difference Decision Diagrams*. In proceedings Annual Conference of the European Association for Computer Science Logic (CSL), September 20-25 1999. Madrid, Spain.) can be used to express (a sub-set of) functions of type $\mathbb{R} \rightarrow \mathbb{B}$, and at the same time provides the needed algorithms. The immediate advantage is that we thereby have a method of encoding product models where the rules comprise (a restricted subset) of quantified expression over variables with

Page 25, lines 23-29 and page 26 lines 1-4:

Another approach, relevant when the rules of the product model comprises more general arithmetic operations is the use of BDDs over *interpreted Boolean variables* (see W. Chan, R. J. Anderson, P. Beame, and D. Notkin: *Combining constraint solving and symbolic model checking for a class of systems with non-linear constraints*. In O. Grumberg, editor, Computer Aided Verification, 9th International Conference, CAV'97 Proceedings, volume 1254 of Lecture Notes in Computer Science, pages 316-327, Haifa, Israel, June 1997. Springer-Verlag.). Each Boolean variable represents a formula, a path in the DAG represents a conjunction of such formulas and satisfiability of such path a path can be determined using for example

linear programming.

The encoding the product model as a virtual table will in the following be described in its preferred embodiment (using BDDs). However, the person skilled in the art can tweak the algorithms to use a different underlying data structured, for example one of the two data structures mentioned above.

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Page 30, lines 1-15:

The use of Boolean Decision Diagrams for the representation of Boolean formulas is well known. For an introduction to Boolean Decision Diagrams see [Cristoph Meinel & Thorsten Theobald: *Algorithms and Data Structures in VLSI Design*, Springer 1998]. We will use the following (well known) textual representation of BDDs:

- 0 represents the terminal BDD 0 (true),
- 1 represents the terminal BDD 1 (false),
- $(a \otimes b)$ represents the BDD obtained by applying a and b with the any binary Boolean operator denoted by \otimes operator.
- $\exists x. a$ represents the BDD obtained by existentially quantifying out the variable x from the BDD a .
- $(x \rightarrow a, b)$ is the BDD representing the formula if x then a else b , which can be expressed in terms of simpler operators as $(x \wedge a) \vee (\neg x \wedge b)$.

BDDs has a well known graphical representation. Figure 5 is an example of this representation. The figure is a BDD over two variables X_0 and X_1 . The chosen ordering \lesssim of the variables is $X_0 \lesssim X_1$ and the BDD represents the formula:

$$X_0 \rightarrow ((X_1 \rightarrow 0, 1), 1) = (\neg X_0) \vee (\neg X_1).$$

Claim Rejections - 35 USC § 103

22. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

23. Claims 1-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 5, 515, 524 issued to Lynch et al. in view of Applicants Own Admission (herein referred as AOA).

1. (Currently Amended)

Lynch discloses a method of configuring a product comprising a number of components (**Title**), the method comprising:

providing, for each component, information relating to a group of alternatives for the component (**See: Abstract lines 1-6; Fig. 2**),

defining rules relating to compatibilities between alternatives from different components (such as **constraints...**; **See: abstract lines 1-6**),

, *the DAG being a non-tree structure* (no patentable weight because new matter), and iteratively configuring the product by repeatedly:

choosing a current component (**See: Col. 5 lines 53-62**),

selecting one of alternatives for the current component (**See: Col. 5 lines 53-62**),

checking whether the selected alternative compatible with other selected alternatives of other chosen components (**See: col. 5 lines 64-67 and Col. 6 lines 1-27**).

Lynch discloses a constraint based configuration system using a structural model hierarchy. However, Lynch fails to disclose representing the rules in a Directed Acyclic Graph (DAG).

AOA discloses representing the rules in a Directed Acyclic Graph (DAG) (**See: Page 25, lines 23-29**).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teaching of Lynch et al with applicant Own Admission to provide the ability to specify the connection or relationship between components of a configured system.

2 (Original)

Lynch discloses a method of configuring a product according to claim 1 in which the iterative configuring is ended when an alternative is chosen for each component and when the chosen alternatives of the components are compatible (**See: Col. 12 lines 55-63; Fig. 7(1) and Fig. 7(2)**).

3. (Previously Presented)

Lynch discloses a method of configuring a product according to claim 1, wherein the step of selecting the alternative, and before the selection of the alternative, comprises: using the DAG to determine, for at least one of the components, a subset of alternatives for the component, so that each of the alternatives in the subset is compatible with the chosen alternatives from the other components (**See: col. 5 lines 64-67 and Col. 6 lines 1-27**), and providing this information to a user (**See: Col. 30 lines 33-46**).

5. (Previously Presented)

Lynch discloses a method of configuring a product according to claim 1, wherein the steps of choosing a component and the alternative further comprise, for each of the components: using the DAG to check which of the alternatives of the component that are compatible with at least one of the chosen alternatives of each of the other components (**See: col. 5 lines 64-67 and Col. 6 lines 1-27**), providing a user with this information (**See: Col. 30 lines 33-46**), allowing the user to select one of the alternatives that were compatible with at least one of each of the other' component's chosen alternatives (**See: Col. 13 lines 11-14**).

6. (Previously Presented)

Lynch discloses a method according to claim 1, wherein the steps of selecting the alternative and checking the DAG further comprise the steps of: selecting or defining

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a subgroup of alternatives to the chosen component, checking the DAG for which of the alternatives in the subgroup that are compatible with chosen alternatives from other components, and providing information relating to which of the alternatives in the subgroup are compatible with chosen alternatives of other components (**See: col. 5 lines 49-67 and Col. 6 lines 1-27**).

7. (Previously Presented)

Lynch discloses a method of configuring a product according to claim 1, wherein the iterative configuration further comprises: at least once, defining information relating to limiting the alternatives of at least one of the components, and checking the DAG for which of the alternatives of the components is compatible with the limiting information (**See: Col. 29 lines 42-61**).

8. (Original)

Lynch discloses a method of configuring a product according to claim 1 in which the iterative configuring is ended upon request from a user, and information is provided relating to all possible compatible products comprising at least one chosen alternative for each of the products for which an alternative is chosen (**See: Col. 5 lines 59-62**), and this information is provided to the user (**See: Col. 30 lines 33-46**).

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9 (Original)

Lynch discloses a method of configuring a product according to claim 1 in which the iterative configuring comprises the steps of obtaining a number of all possible compatible products comprising at least one chosen alternative for each of the products for which an alternative is chosen (**See: Col. 5 lines 59-62**), and providing this information to the user (**See: Col. 30 lines 33-46**).

Regarding Claim 10-31:

Claims 10-31 recite the structure and feature of DAG, which is merely using the existing features of the prior art (See: **Applicants Admission**). Applicants do not disclosed inventing a DAG system. Therefore, any claims directed to the structure and feature of DAG method must be regarded as being a prior art. All the features and limitation recited in claim 10-31 are prior art and disclosed in Applicants Admission shown above.

32. (Previously Presented)

Lynch discloses a method of configuring a product according to claim 1, the method further comprising: identifying a user, performing the step of selecting an alternative of a component by the user through communication between a device controlled by the user and another device where the iterative configuration is performed, transmitting information relating to the checking of the DAG to the user (**See: col. 30**

lines 40-45).

33. (Previously Presented)

Lynch discloses a method of configuring a product according to claim 1, wherein the method further comprises: identifying a user, prior to the iterative configuring: transmitting the DAG to a device controlled by the user (**See: Col. 30 lines 33-46**), performing the iterative configuring on the user's device (**See: Col. 30 lines 46-52**).

34. (Previously Presented)

Lynch discloses a method of configuring a product according to claim 1, further comprising the steps of, during the iterative configuration: obtaining information relating to one or more alternatives for components for which no alternatives have been chosen, each of the one or more alternatives being compatible with the chosen alternatives (**See: Col. 30 lines 35-39**), and providing the user' with this information (**See: Col. 30 lines 33-46**).

36. (Previously Presented)

Lynch discloses a method of configuring a product according to claim 1, wherein the method further comprises identifying a configurable device and an interface device, and storing the DAG representing the rules on the configurable device, uploading the DAG from the configurable device to the interface device, and in the step of iteratively configuring the product, performing the checking of the DAG whether the alternative selected is compatible with other chosen alternatives from other components on the interface device (**See: col. 5 lines 64-67 and Col. 6 lines 1-27**).

37. (Previously Presented)

Lynch discloses a method of configuring a product according to claim 36 wherein the method further comprises identifying a list of predetermined components in the configurable device and identifying a list of predetermined alternatives for these components in the configurable device, and wherein the step of iteratively configuring the product further comprises performing the checking of the DAG whether the alternative selected is compatible with other chosen alternatives from other components and compatible with the predetermined alternatives on the interface device (**See: col. 5 lines 64-67 and Col. 6 lines 1-27**).

38. (Previously Presented)

Lynch discloses a method of configuring a product according to claim 1, wherein the method further comprises identifying a list of observer components and a list of non-observer components, and

representing the rules for the non-observer components in a DAG, determining, for each observer component, a subset of the rules, such that from these rules it is possible to determine the alternatives for the observer component that are compatible with alternatives for the non-observer components (**See: Abstract**),

representing for each observer component the subset of rules as an observer DAG, and in the step of iteratively configuring the product (**See: Abstract**),

checking the DAG whether the alternative selected is compatible with other chosen alternatives from other components (**See: col. 5 lines 64-67 and Col. 6 lines 1-27**),

determining a set of system determined alternatives by determining for each component whether there is only a single alternative compatible with all the chosen alternatives (**See: Col. 5 lines 59-62**),

for at least one of the observer components, checking the observer DAG for the observer component to determine whether there is only a single alternative compatible with other chosen alternatives and the set of system determined alternatives (**See: col. 5 lines 64-67 and Col. 6 lines 1-27**), and

providing this information to a user (**See: Col. 30 lines 33-46**).

39. (Previously Presented)

Lynch discloses a method of configuring a product according to claim 1 wherein the step of iteratively configuring the product further comprises for each pair of component and alternative providing a classification of the state of the pair, adopting the classification to one of a list of outcomes comprising blocked, selectable, user selected, system selected, or forceable, providing a classification of blocked when the alternative cannot be chosen for the component even without considering choices of alternatives for other components, providing a classification of selectable when the alternative for the component is compatible with the chosen alternatives from the other components, providing a classification of user selected when the alternative has already been chosen

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for the component, providing a classification of system selected when the alternative is the only choice for the component that is compatible with the chosen alternatives from the other components and the alternative has not been chosen by the user, providing a classification of forceable when the alternative can be chosen for the component but is incompatible with some of the other choices of alternatives of the other components (See: Col. 12 lines 3-10, Col. 28 lines 10-21, lines 37-39, lines 47-67), and providing information on the classification to a user (See: Col. 30 lines 33-46).

40. (Original)

A computer program comprising computer program code means adapted to perform all the steps of the method of claim 1 when said program is run on a computer (intended use).

41 (Original)

A computer' program as claimed in claim 40 embodied on a computer-readable medium (intended use).

42. (Original)

A computer readable medium comprising the computer program according to claim 40 (intended use).

43, (New)

A method of configuring a product according to claim 1, wherein the non-tree structure has at least one sharing node such that at least two paths in the non-tree structure enter into the at least one sharing node (**no patentable weight because non-**

tree structure is new matter).

44. (New)

A method of configuring a product according to claim 1, wherein the non-tree structure has at least one path from a topmost node to a bottommost node satisfying all of the rules in the DAG, each of the components having one alternative in the at least one path such that the alternative of each of the components in the at least one path is compatible with each other **(no patentable weight because non-tree structure is new matter).**

45. (New)

Lynch discloses a method of configuring a product according to claim 1, wherein at least one of the alternatives of the current component is compatible with the other selected alternatives respectively for the other chosen components and is compatible with at least one of the alternatives in each of yet-to-be-chosen components **(See: Abstract).**

Claim Rejections - 35 USC § 102

24. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

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only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

25. Claims 4, and 35 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent No. 6, 430, 531 B1 issued to Polish et al.

4 (Currently Amended)

Polish discloses A method of configuring a product according to claim 3, wherein the method further comprises providing a system with a speech synthesizer and the providing of information to a user further comprises providing the information by speech which is generated by the speech synthesizer (**See: Fig. 1 # 103, #117 and corresponding texts**).

35. (Previously Presented)

Polish discloses a method of configuring a product according to claim 1, wherein the method further comprises providing a system with a speech recognizer, and wherein the step of iteratively configuring the product further comprises choosing a component from a text recognized by the speech recognizer; and selecting an alternative from this component's group of alternatives from a text recognized by the speech recognizer (**See: Fig. 7 and corresponding texts**).

Conclusion

26. Claims 1-45 are rejected.

27. Examiner's Note: **Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant.**

Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. **It is respectfully requested from the applicant in preparing responses, to fully consider the references in their entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.**

28. **In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on** for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

29. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

I. *US Patent No. 6,522,331 B1 issued to Danks et al.*

Communications

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kibrom K. Gebresilassie whose telephone number is 571-272-8571. The examiner can normally be reached on 8:00 am - 4:30 pm Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamini S. Shah can be reached on 571-272-2279. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KG

[Signature]
HUGH JONES Ph.D.
PRIMARY PATENT EXAMINER
TECHNOLOGY CENTER 2100